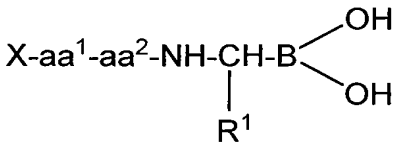
Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1. - 13. (Canceled)

14. (Currently Amended) A pharmaceutically acceptable base addition salt of a boronic acid of formula (II):



(II)

where:

X is H or an amino-protecting group;

aa^1 is an amino acid residue having a hydrocarbyl side chain containing no more than 20 carbon atoms and comprising at least one cyclic group having up to 13 carbon atoms;

aa^2 is an imino acid residue having from 4 to 6 ring members;

R^1 is a group of the formula $-(CH_2)_s-Z$, where s is 2, 3 or 4 and Z is -OH, -OMe, -OEt or halogen,

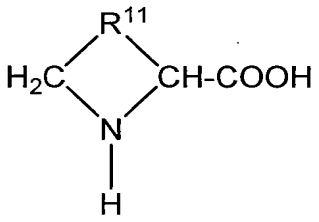
wherein said salt is in solid form, and

wherein said salt is more stable to deboronation than the corresponding boronic acid of formula (II).

15. (Previously Presented) The salt of claim 14 wherein aa^1 is selected from Phe, Dpa and wholly or partially hydrogenated analogues thereof.

16. (Original) The salt of claim 15 wherein aa^1 is of R-configuration.

17. (Original) The salt of claim 14 wherein aa^2 is a residue of an imino acid of formula (IV)



(IV),

where R^{11} is $-CH_2-$, $-CH_2-CH_2-$, $-S-CH_2-$, $-S-C(CH_3)_2-$ or $-CH_2-CH_2-CH_2-$, and, when the formula (IV) ring is 5- or 6-membered, the formula (IV) ring is unsubstituted or is substituted at one or more $-CH_2-$ groups by from 1 to 3 C_1-C_3 alkyl groups.

18. (Original) The salt of claim 17 wherein aa^2 is of S-configuration.

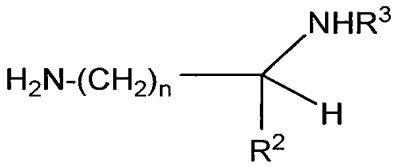
19. (Original) The salt of claim 14, wherein aa^1-aa^2 is (R)-Phe-(S)-Pro and the fragment -NH-CH(R_1)-B(OH)$_2$ is of R-configuration.

20. (Previously Presented) The salt of claim 15 wherein the boronic acid is of formula (VIII):

X-(R)-Phe-(S)-Pro-(R)-boroMpg-OH (VIII),

wherein X is R^6-$(CH_2)_p$-C(O)-, R^6-$(CH_2)_p$-S(O)$_2$-, R^6-$(CH_2)_p$-NH-C(O)- or R^6-$(CH_2)_p$-O-C(O)-, wherein p is 0, 1, 2, 3, 4, 5 or 6 and R^6 is H or a 5 to 13-membered cyclic group which is unsubstituted or substituted by 1, 2 or 3 substituents selected from halogen; amino; nitro; hydroxy; a C_5-C_6 cyclic group; C_1-C_4 alkyl or C_1-C_4 alkyl containing, or linked to the cyclic group through, an in-chain O atom, the aforesaid alkyl groups optionally being substituted by a substituent selected from halogen, amino, nitro, hydroxy or a C_5-C_6 cyclic group; and boroMpg-OH is a residue of an aminoboronic acid of the formula H_2N-CH($(CH_2)_3$OMe)B(OH)$_2$.

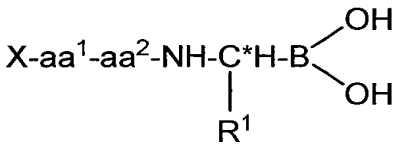
21. (Original) The salt of claim 15 wherein the salt comprises a salt of the boronic acid with an alkali metal, an aminosugar or an amine of formula (XI):



(XI)

where n is from 1 to 6, R^2 is H, carboxylate or derivatised carboxylate, R^3 is H, C_1-C_4 alkyl or a residue of a natural or unnatural amino acid.

22. (Currently Amended) A pharmaceutical product comprising a therapeutically effective amount of a boronate salt which consists essentially of a single base addition salt of a boronic acid formula (XX):



(XX)

where:

X is H or an amino-protecting group;

aa^1 is an amino acid residue of R-configuration having a hydrocarbyl side chain containing no more than 20 carbon atoms and comprising at least one cyclic group having up to 13 carbon atoms;

aa^2 is an imino acid residue of S-configuration having from 4 to 6 ring members;

C* is a chiral centre of R-configuration; and

R^1 is a group of the formula $-(CH_2)_s-Z$, where s is 2, 3 or 4 and Z is -OH, -OMe, -OEt or halogen, and

wherein said salt is more stable to deboronation than the corresponding boronic acid of formula (XX).

23. - 36. (Canceled)

37. (Previously Presented) The salt of claim 14, wherein the salt is a calcium salt of a boronic acid of the formula Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-$B(OH)_2$.

38. (Previously Presented) The salt of claim 37 wherein the salt comprises a salt of the formula $(Cbz\text{-}(R)\text{-}Phe\text{-}(S)\text{-}Pro\text{-}(R)\text{-}Mpg\text{-}B(OH)(O^-))_2Ca^+$ where the symbol -B(OH)(O-) refers to the corresponding tetrahedral boronyl groups as well as the trigonal boronyl group.

39. (Canceled)

40. (Previously Presented) The salt of claim 14 wherein aa^1 is of (R)-configuration, aa^2 is of (S)-configuration and the fragment $-NH\text{-}CH(R^1)\text{-}B(OH)_2$ is of (R)-configuration.

41. (Previously Presented) The salt of claim 40 wherein R^1 is methoxypropyl.

42. (Previously Presented) The salt of claim 41 which is an alkali or alkaline earth metal salt.

43. (Previously Presented) The salt of claim 14 which is not an ammonium or choline salt.

44. (Previously Presented) The salt of claim 14 which comprises anhydride species of the boronic acid.

45. (Previously Presented) The salt of claim 14 which is an alkali metal salt of a boronic acid of the formula Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-$B(OH)_2$.

46. (Previously Presented) The salt of claim 45 which comprises anhydride species of the boronic acid.

47. (Previously Presented) The salt of claim 40 wherein Z is -OMe or -OEt and which is not an ammonium or choline salt and which comprises anhydride species of the boronic acid.

48. (Previously Presented) The salt of claim 40 wherein aa^1 is (R)-Phe or (R)-Dpa, aa^2 is (S)-Pro or (S)-azetidine-2-carboxylic acid and R^1 is methoxypropyl.

49. (Previously Presented) The salt of claim 40 wherein Z is -OMe or -OEt and which is not an ammonium or choline salt and is in a pharmaceutically acceptable aqueous solution.

50. (Previously Presented) The salt of claim 49 which is a salt of an alkali metal, an alkaline earth metal or a strongly basic organic compound.

51. (Previously Presented) The salt of claim 49 wherein the organic compound is an aminosugar, lysine or arginine.

52. (Currently Amended) A sodium salt of a boronic acid of the formula Cbz-(R)-Phe-(S)-Pro-(R)-boroMpg-OH, wherein boroMpg is a residue of an aminoboronic acid of the formula H_2N-CH($(CH_2)_3$OMe)B$(OH)_2$, wherein said salt is in solid form, and wherein said salt is more stable to deboronation than the boronic acid of the formula Cbz-(R)-Phe-(S)-Pro-(R)-boroMpg-OH.

53. (Currently Amended) A pharmaceutically acceptable aqueous solution comprising a sodium salt of a boronic acid of the formula Cbz-(R)-Phe-(S)-Pro-(R)-boroMpg-OH, wherein boroMpg is a residue of an aminoboronic acid of the formula H_2N-CH($(CH_2)_3$OMe)B$(OH)_2$, and wherein said salt is more stable to deboronation than the boronic acid of the formula Cbz-(R)-Phe-(S)-Pro-(R)-boroMpg-OH.

54. (Previously Presented) The salt of claim 52 which comprises anhydride species of the boronic acid.

55. (Previously Presented) The salt of claim 52 which is the monosodium salt.

56. (Canceled)

57. (Currently Amended) A composition of matter which is pharmaceutically acceptable and has the characteristics of a product obtained by contacting a boronic acid of the formula Cbz-(R)-(Phe)-(S)-Pro-(R)-Mpg-$B(OH)_2$ and a pharmaceutically acceptable base selected from alkali metal bases, alkaline earth metal bases, aminosugars, lysine and arginine, wherein said composition ~~salt~~ is in solid form, and wherein said composition is more stable to deboronation than the boronic acid of the formula Cbz-(R)-Phe-(S)-Pro-(R)-boroMpg-$(OH)_2$.

58. (Canceled)

59. (Previously Presented) The composition of matter of claim 57 when comprised in a pharmaceutical formulation.

60. (Previously Presented) The composition of matter of claim 57 wherein the base is a sodium base.

61. (Previously Presented) A pharmaceutically acceptable aqueous solution comprising the composition of matter of claim 57, wherein the base is a sodium base.

62. (Currently Amended) A pharmaceutical formulation comprising in the solid phase a compound which is a source of boronate species corresponding to the acid Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-$B(OH)_2$ and a source of pharmaceutically acceptable cations other than choline and ammonium, and wherein said formulation is more stable

to deboronation than the boronic acid of the formula Cbz-(R)-Phe-(S)-Pro-(R)-boroMpg-$(OH)_2$.

63. (Previously Presented) The formulation of claim 62 wherein the cations are alkali metal ions.

64. (Previously Presented) The formulation of claim 62 wherein the cations are sodium ions.

65. (Previously Presented) A water-miscible organic solvent comprising the salt of claim 14.

66. (Previously Presented) The salt of claim 14, wherein the salt exhibits improved stability, relative to the boronic acid, as measured according to the procedure of Example 28.

67. (Previously Presented) A solution consisting of water and the salt of claim 14.

68. (Previously Presented) A solution consisting of a solvent, the salt of claim 14, and one or more pharmaceutically acceptable diluents, carriers or excipients.

69. (Previously Presented) A solution consisting of water and the salt of claim 45.

70. (Previously Presented) A solution consisting of a solvent, the salt of claim 45, and one or more pharmaceutically acceptable diluents, carriers or excipients.

71. (Previously Presented) The salt of claim 14, wherein the salt has a solubility in water of about 10 mM or more at a dissolution of 25 mg/ml, as measured according to the procedure of Example 10.

72. (Previously Presented) The salt of claim 14, wherein the boronic acid is of the formula Cbz-(R)-Phe-(S)-Pro-(R)-Mpg-$B(OH)_2$.